SUBCHAPTER D : PETROLEUM REFINING, NATURAL GAS PROCESSING, AND PETROCHEMICAL PROCESSES

PROCESS UNIT TURNAROUND AND VACUUM-PRODUCING SYSTEMS IN PETROLEUM REFINERIES

§§115.311-115.313, 115.315-115.317, 115.319
Effective May 22, 1997

§115.311. Emission Specifications.

(a) For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), the following emission specifications on vacuum-producing systems shall apply:

(1) No person may be allowed to emit any volatile organic compound (VOC) from a steam ejector or mechanical vacuum pump in a petroleum refinery unless the vent stream is controlled properly in accordance with §115.312(a) of this title (relating to Control Requirements).

(2) No person may be allowed to emit any VOC from a hotwell with a contact condenser unless the hotwell is covered and the vapors from the hotwell are controlled properly in accordance with §115.312(a) of this title.

(b) For all affected persons in Gregg, Nueces, and Victoria Counties, the following emission specifications on vacuum-producing systems shall apply:

(1) No person may be allowed to emit any VOC from a steam ejector or mechanical vacuum pump in a petroleum refinery, unless the vent stream is controlled properly in accordance with §115.312(b)(2) of this title.

(2) No person may be allowed to emit any VOC from a hotwell with a contact condenser, unless the hotwell is covered and the vapors from the hotwell are controlled properly in accordance with §115.312(b)(2) of this title.

Adopted April 30, 1997 Effective May 22, 1997

§115.312. Control Requirements.

(a) For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following control requirements shall apply:

(1) Volatile organic compound (VOC) emissions from petroleum refineries shall be controlled during process unit shutdown or turnaround with the following procedure:

(A) recover and store all pumpable or drainable liquid; and

(B) reduce vessel gas pressure to 5 psig (34.5 kPa gauge) or less by recovery or combustion before venting to the atmosphere.

(2) Vent gas streams affected by §115.311(a) of this title (relating to Emission Specifications) must be controlled properly with a control efficiency of at least 90% or to a VOC concentration of no more than 20 parts per million by volume (ppmv) (on a dry basis corrected to 3% oxygen for combustion devices):

(A) in a direct-flame incinerator at a temperature equal to or greater than 1300°F (704°C);

(B) in a smokeless flare; or

(C) by any other vapor recovery system, as defined in §115.10 of this title (relating to Definitions).

(b) For all affected persons in Gregg, Nueces, and Victoria Counties, the following control requirements shall apply:

(1) VOC emissions from petroleum refineries shall be controlled during process unit shutdown or turnaround with the following procedure:

(A) recover and store all pumpable or drainable liquid; and

(B) reduce vessel gas pressure to five psig (34.5 kPa gauge) or less by recovery or combustion before venting to the atmosphere.

(2) Vent gas streams affected by §115.311(b) of this title must be controlled properly with a control efficiency of at least 90% or to a VOC concentration of no more than 20 ppmv (on a dry basis corrected to 3% oxygen for combustion devices):

(A) in a direct-flame incinerator at a temperature equal to or greater than 1300°F (704°C);

(B) in a smokeless flare; or

(C) by any other vapor recovery system, as defined in §115.10 of this title.

§115.313. Alternate Control Requirements.

(a) For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements in this undesignated head (relating to Process Unit Turnaround and Vacuum-Producing Systems in Petroleum Refineries) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

(b) For all affected persons in Gregg, Nueces, and Victoria Counties, alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements in this undesignated head (relating to Process Unit Turnaround and Vacuum-Producing Systems in Petroleum Refineries) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

Adopted April 30, 1997 Effective May 22, 1997

§115.315. Testing Requirements.

(a) For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, compliance with §115.311(a) of this title (relating to Emission Specifications) and §115.312(a) of this title (relating to Control Requirements) shall be determined by applying the following test methods, as appropriate:

(1) Test Method 22 (40 CFR 60, Appendix A) for visual determination of fugitive emissions from material sources and smoke emissions from flares;

(2) additional control device requirements for flares described in 40 CFR 60.18(f);

(3) Test Methods 1-4 (40 CFR 60, Appendix A) for determining flow rate, as necessary;

(4) Test Method 18 (40 CFR 60, Appendix A) for determining gaseous organic compound emissions by gas chromatography;

(5) Test Method 25 (40 CFR 60, Appendix A) for determining total gaseous nonmethane organic emissions as carbon;

(6) Test Methods 25A or 25B (40 CFR 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis; or

(7) minor modifications to these test methods approved by the Executive Director.

(b) For all affected persons in Gregg, Nueces, and Victoria Counties, compliance with §115.311(b) of this title and §115.312(b) of this title shall be determined by applying the following test methods, as appropriate:

(1) Test Method 22 (40 CFR 60, Appendix A) for visual determination of fugitive emissions from material sources and smoke emissions from flares;

(2) additional control device requirements for flares described in 40 CFR 60.18(f);

(3) Test Methods 1-4 (40 CFR 60, Appendix A) for determining flow rate, as necessary;

(4) Test Method 18 (40 CFR 60, Appendix A) for determining gaseous organic compound emissions by gas chromatography;

(5) Test Method 25 (40 CFR 60, Appendix A) for determining total gaseous nonmethane organic emissions as carbon;

(6) Test Methods 25A or 25B (40 CFR 60, Appendix A) for determining total gaseous organic concentrations using flame ionization or nondispersive infrared analysis; or

(7) minor modifications to these test methods approved by the Executive Director.

Adopted May 8, 1992 Effective August 1, 1992

§115.316. Monitoring and Recordkeeping Requirements.

(a) For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following recordkeeping requirements shall apply:

(1) Any person who operates a vacuum-producing system affected by §115.311(a) of this title (relating to Emission Specifications) shall keep the following records:

(A) continuous monitoring of the exhaust gas temperature immediately downstream of a direct-flame incinerator;

(B) continuous monitoring of temperatures upstream and downstream of a catalytic incinerator or chiller;

(C) continuous monitoring of the exhaust gas volatile organic compound (VOC) concentration of any carbon adsorption system, as defined in §115.10 of this title (relating to Definitions), to determine breakthrough; and

(D) the date and reason for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities.

(2) Any person who conducts a process unit turnaround affected by §115.312(a) of this title (relating to Control Requirements) shall keep the following records:

(A) the date of process unit shutdown and subsequent start-up following turnaround;

(B) the type of process unit involved in the turnaround; and

(C) an estimation of the concentration and total emissions of VOC emissions released to the atmosphere during the process turnaround.

(3) The results of any testing conducted in accordance with the provisions specified in §115.315(a) of this title (relating to Testing Requirements) shall be maintained at the affected facility.

(4) All records shall be maintained for two years and be made available for review upon request by authorized representatives of the Texas Natural Resource Commission (TNRCC), United States Environmental Protection Agency (EPA), or local air pollution control agencies.

(b) For all affected persons in Victoria County, the following recordkeeping requirements shall apply:

(1) Any person who operates a vacuum-producing system affected by §115.311(b) of this title shall keep the following records:

(A) continuous monitoring of the exhaust gas temperature immediately downstream of a direct-flame incinerator;

(B) continuous monitoring of temperatures upstream and downstream of a catalytic incinerator or chiller;

(C) continuous monitoring of the exhaust gas VOC concentration of any carbon adsorption system, as defined in §115.10 of this title, to determine breakthrough; and

(D) the date and reason for any maintenance and repair of the required control devices and the estimated quantity and duration of VOC emissions during such activities.

(2) Any person who conducts a process unit turnaround affected by §115.312(b) of this title shall keep the following records:

(A) the date of process unit shutdown and subsequent start-up following turnaround;

(B) the type of process unit involved in the turnaround; and

(C) an estimation of the concentration and total emissions of VOC emissions released to the atmosphere during the process turnaround.

(3) The results of any testing conducted in accordance with the provisions specified in §115.315(b) of this title shall be maintained at the affected facility.

(4) All records shall be maintained for two years and be made available for review upon request by authorized representatives of the TNRCC, EPA, or local air pollution control agencies.

Adopted October 16, 1992 Effective November 16, 1992

§115.317. Exemptions.

For all affected persons in Gregg, Nueces, and Victoria Counties, any vacuum-producing system emitting a combined weight of volatile organic compounds equal to or less than 100 pounds (45.4 kg) in any consecutive 24-hour period is exempt from the requirements of §115.311(b) of this title (relating to Emission Specifications).

Adopted May 8, 1992 Effective August 1, 1992

§115.319. Counties and Compliance Schedules.

All affected persons in Brazoria, Chambers, Collin, Dallas, Denton, El Paso, Fort Bend, Galveston, Gregg, Hardin, Harris, Jefferson, Liberty, Montgomery, Nueces, Orange, Tarrant, Victoria, and Waller Counties shall continue to comply with this undesignated head (relating to Process Unit Turnaround and Vacuum-Producing Systems in Petroleum Refineries) as required by §115.930 of this title (relating to Compliance Dates).

Adopted April 30, 1997 Effective May 22, 1997

FUGITIVE EMISSION CONTROL IN PETROLEUM REFINERIES IN GREGG, NUECES, AND VICTORIA COUNTIES

Effective May 22, 1997
§§115.322-115.327, 115.329

§115.322. Control Requirements.

For Gregg, Nueces, and Victoria Counties, no person shall operate a petroleum refinery without complying with the following requirements:

(1) No component shall be allowed to have a volatile organic compound (VOC) leak as defined in §115.10 of this title (relating to Definitions) for more than 15 calendar days after the leak is found, except as provided in paragraph (2) of this section.

(2) A first attempt at repair shall be made no later than five calendar days after the leak is found, and the component shall be repaired no later than 15 calendar days after the leak is found, unless the repair of a component would require a unit shutdown which would create more emissions than the repair would eliminate. A component in gas/vapor or light liquid service is considered to be repaired when it is monitored with an instrument using Test Method 21 and shown to no longer have a leak after adjustments or alterations to the component. A component in heavy liquid service is considered to be repaired when it is monitored by audio, visual, and olfactory means and shown to no longer have a leak after adjustments or alterations to the component. If the repair of a component would require a unit shutdown which would create more emissions than the repair would eliminate, the repair may be delayed until the next scheduled shutdown.

(3) All leaking components, as defined in paragraph (1) of this section, which can not be repaired until the unit is shut down for turnaround shall be identified for such repair by tagging. The executive director at his discretion may require early unit turnaround or other appropriate action based on the number and severity of tagged leaks awaiting turnaround.

(4) Except for safety pressure relief valves, no valves shall be installed or operated at the end of a pipe or line containing a VOC, unless the pipe or line is sealed with a second valve, a blind flange, a plug, or a cap. The sealing device may be removed only while a sample is being taken or during maintenance operations, and when closing the line, the upstream valve shall be closed first.

(5) Pipeline valves and pressure relief valves in gaseous VOC service shall be marked in some manner that will be readily obvious to monitoring personnel.

§115.323. Alternate Control Requirements.

For all affected persons in Gregg, Nueces, and Victoria Counties, the following alternate control techniques may apply:

(1) Any alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this undesignated head (relating to Fugitive Emission Control in Petroleum Refineries in Gregg, Nueces, and Victoria Counties) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

(2) The executive director may approve an alternate monitoring method if the refinery operator can demonstrate that the alternate monitoring method satisfies the conditions of §115.324(7) of this title (relating to Inspection Requirements). Any request for an alternate monitoring method must be made in writing to the executive director.

Adopted April 30, 1997 Effective May 22, 1997

§115.324. Inspection Requirements.

For Gregg, Nueces, and Victoria Counties, the owner or operator of a petroleum refinery shall conduct a monitoring program consistent with the following provisions:

(1) Measure yearly (with a hydrocarbon gas analyzer) the emissions from all:

(A) pump seals;

(B) pipeline valves in liquid service;

(C) process drains; and

(D) all valves elevated more than two meters above any permanent structure.

(2) Measure quarterly (with a hydrocarbon gas analyzer) the emissions from all:

(A) compressor seals;

(B) pipeline valves in gaseous service; and

(C) pressure relief valves in gaseous service.

(3) Visually inspect, weekly, all pump seals.

(4) Measure (with a hydrocarbon gas analyzer) the emissions from any component, except those exempted by §115.327(2)-(3) of this title (relating to Exemptions), whenever a potential leak is detected by sight, sound, or smell.

(5) Measure (with a hydrocarbon gas analyzer) emissions from any relief valve which has vented to the atmosphere within 24 hours.

(6) Upon the detection of a leaking component, shall affix to the leaking component a weatherproof and readily visible tag, bearing an identification number and the date the leak was located. This tag shall remain in place until the leaking component is repaired.

(7) The monitoring schedule of paragraphs (1)-(3) of this section may be modified as follows:

(A) After completion of the required quarterly valve monitoring for a period of at least two years, the operator of a refinery may request in writing to the executive director that the valve monitoring schedule be revised based on the percent of valves leaking. The percent of valves leaking shall be determined by dividing the sum of valves leaking during current monitoring and valves for which repair has been delayed by the total number of valves subject to the requirements. This request shall include all data that have been developed to justify the following modifications in the monitoring schedule:

(i) after two consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0%, an owner or operator may begin to skip one of the quarterly leak detection periods for the valves in gas/vapor and light liquid service;

(ii) after five consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0%, an owner or operator may begin to skip three of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(iii) Leak detection skip period requirements for any New Source Performance Standard or National Emission Standard for Hazardous Air Pollutants may be substituted for clauses (i) and (ii) of this subparagraph.

(B) If the executive director determines that there is an excessive number of leaks in any given process area, he may require an increase in the frequency of monitoring for that process area of the refinery.

Adopted April 30, 1997 Effective May 22, 1997

§115.325. Testing Requirements.

For all affected persons in Gregg, Nueces, and Victoria Counties, compliance with this undesignated head (relating to Fugitive Emission Control in Petroleum Refineries) shall be determined by applying the following test methods, as appropriate:

(1) Test Method 21 (40 CFR 60, Appendix A, effective 6/22/90) for determining volatile organic compound (VOC) leaks. The leak detection equipment can be calibrated with methane, propane, or hexane, but the meter readout must be as parts per million by volume (ppmv) hexane;

(2) determination of true vapor pressure using ASTM Test Method D323-82 for the measurement of Reid vapor pressure, adjusted for 68°F (20°C) in accordance with API Publication 2517, Third Edition, 1989; or

(3) minor modifications to these test methods approved by the executive director.

Adopted April 30, 1997 Effective May 22, 1997

§115.326. Recordkeeping Requirements.

For Gregg, Nueces, and Victoria Counties, the owner or operator of a petroleum refinery shall have the following recordkeeping requirements:

(1) Submit to the executive director a monitoring program plan. This plan shall contain, at a minimum, a list of the refinery units and the quarter in which they will be monitored, a copy of the log book format, and the make and model of the monitoring equipment to be used.

(2) Maintain a leaking-components monitoring log for all leaks of more than 10,000 ppmv of volatile organic compound (VOC) detected by the monitoring program required by §115.324 of this title (relating to Inspection Requirements). This log shall contain, at a minimum, the following data:

(A) the name of the process unit where the component is located;

(B) the type of component (e.g., valve or seal);

(C) the tag number of the component;

(D) the date on which a leaking component is discovered;

(E) the date on which a leaking component is repaired;

(F) the date and instrument reading of the recheck procedure after a leaking component is repaired;

(G) a record of the calibration of the monitoring instrument;

(H) those leaks that cannot be repaired until turnaround; and

(I) the total number of components checked and the total number of components found leaking.

(3) Retain copies of the monitoring log for a minimum of two years after the date on which the record was made or the report prepared.

(4) Maintain all monitoring records for at least two years and make them available for review upon request by authorized representatives of the executive director, EPA, or local air pollution control agencies.

Adopted April 30, 1997 Effective May 22, 1997

§115.327. Exemptions.

For all affected persons in Gregg, Nueces, and Victoria Counties, the following exemptions shall apply:

(1) Valves with a nominal size of two inches (5 cm) or less are exempt from the requirements of this undesignated head (relating to Fugitive Emission Control in Petroleum Refineries), provided allowable emissions at any refinery from sources affected by these sections after controls are applied with exemptions will not exceed by more than 5.0% such allowable emissions with no exemptions. Any person claiming an exemption for valves two inches (5 cm) nominal size or smaller under this section shall, at the time he provides his control plan, also provide the following information:

(A) identification of valves or classes of valves to be exempted;

(B) an estimate of uncontrolled emissions from exempted valves, and an estimate of emissions if controls were applied, plus an explanation of how the estimates were derived; and

(C) an estimate of the total volatile organic compound (VOC) emissions within the refinery from sources affected by §115.322 of this title (relating to Control Requirements), §115.324 of this title (relating to Inspection Requirements), and §115.326 of this title (relating to Recordkeeping Requirements) after controls are applied and assuming no exemptions for small valves, plus an explanation of how the estimate was derived.

(2) Components which contact a process fluid that contains less than 10% VOC by weight are exempt from the requirements of this undesignated head (relating to Fugitive Emission Control in Petroleum Refineries).

(3) Components which contact a process liquid containing a VOC having a true vapor pressure equal to or less than 0.147 psia (1.013 kPa) at 68°F (20°C) are exempt from the requirements of §115.324 of this title if the components are inspected visually according to the inspection schedules specified within this same section.

(4) Petroleum refineries or individual process units in a temporary nonoperating status shall submit a plan for compliance with the provisions of this undesignated head (relating to Fugitive Emission Control in Petroleum Refineries), as soon as practicable, but no later than one month before the process unit is scheduled for start-up and be in compliance as soon as practicable, but no later than three months after

start-up. All petroleum refineries affected by this section shall notify the executive director of any nonoperating refineries or individual process units when they are shut down and dates of any start-ups as they occur.

(5) Pressure relief devices connected to an operating flare header, components in continuous vacuum service, storage tank valves, and valves that are not externally regulated (such as in-line check valves) are exempt from the monitoring requirement of §115.324 of this title.

(6) Compressors in hydrogen service are exempt from the requirements of §115.324 of this title if the owner or operator demonstrates that the percent hydrogen content can be reasonably expected to always exceed 50.0% by volume.

Adopted April 30, 1997 Effective May 22, 1997

§115.329. Counties and Compliance Schedules.

All affected persons in Gregg, Nueces, and Victoria Counties shall continue to comply with this undesignated head (relating to Fugitive Emission Control in Petroleum Refineries) as required by §115.930 of this title (relating to Compliance Dates).

Adopted April 30, 1997 Effective May 22, 1997

FUGITIVE EMISSION CONTROL IN PETROLEUM REFINING, NATURAL GAS/GASOLINE PROCESSING, AND PETROCHEMICAL PROCESSES IN OZONE NONATTAINMENT AREAS

Effective May 22, 1997
§§115.352-115.357, 115.359

§115.352. Control Requirements.

For the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas as defined in §115.10 of this title (relating to Definitions), no person shall operate a petroleum refinery; a synthetic organic chemical, polymer, resin, or methyl tert-butyl ether manufacturing process; or a natural gas/gasoline processing operation as defined in §115.10 of this title, without complying with the following requirements.

(1) Except as provided in paragraph (2) of this section, no component shall be allowed to have a volatile organic compound (VOC) leak for more than 15 calendar days after the leak is found which exceeds the following:

(A) a VOC concentration greater than 500 parts per million by volume (ppmv) above background as methane, propane, or hexane, or the dripping or exuding of process fluid based on sight, smell, or sound for all components except pump seals and compressor seals;

(B) a VOC concentration greater than 10,000 ppmv above background as methane, propane, or hexane, or the dripping or exuding of process fluid based on sight, smell, or sound for all pump seals and compressor seals.

(2) A first attempt at repair shall be made no later than five calendar days after the leak is found and the component shall be repaired no later than 15 calendar days after the leak is found, unless the repair of the component would require a unit shutdown which would create more emissions than the repair would eliminate. A component in gas/vapor or light liquid service is considered to be repaired when it is monitored with an instrument using Test Method 21 and shown to no longer have a leak after adjustments or alterations to the component. A component in heavy liquid service is considered to be repaired when it is monitored by audio, visual, and olfactory means and shown to no longer have a leak after adjustments or alterations to the component. If the repair of a component would require a unit shutdown which would create more emissions than the repair would eliminate, the repair may be delayed until the next shutdown.

(3) All leaking components, as defined in paragraph (1) of this section, which cannot be repaired until a unit shutdown shall be identified for such repair by tagging. The Executive Director, at his discretion, may require an early unit shutdown or other appropriate action based on the number and severity of tagged leaks awaiting a unit shutdown.

(4) Except for safety pressure relief valves, no valves shall be installed or operated at the end of a pipe or line containing VOC unless the pipe or line is sealed with a second valve, a blind flange, a

plug, or a cap. The sealing device may be removed only while a sample is being taken or during maintenance operations, and when closing the line, the upstream valve shall be closed first.

(5) Construction of new and reworked piping, valves, and pump and compressor systems shall conform to applicable American National Standards Institute, American Petroleum Institute, American Society of Mechanical Engineers, or equivalent codes.

(6) New and reworked underground process pipelines shall contain no buried valves such that fugitive emission monitoring is rendered impractical.

(7) To the extent that good engineering practice will permit, new and reworked valves and piping connections shall be so located to be reasonably accessible for leak-checking during plant operation. Valves elevated more than two meters above a support surface will be considered nonaccessible. Nonaccessible valves shall be identified in a list to be made available upon request.

(8) New and reworked piping connections shall be welded or flanged. Screwed connections are permissible only on new piping smaller than two inches in diameter. No later than the next scheduled quarterly monitoring after initial installation or replacement, all new or reworked connections shall be gas tested or hydraulically tested at no less than normal operating pressure and adjustments made, as necessary, to obtain leak-free performance.

(9) For valves equipped with rupture discs, a pressure gauge or an equivalent device or system shall be installed between the relief valve and rupture disc to monitor disc integrity. All leaking discs shall be replaced at the earliest opportunity, but no later than the next process shutdown. Equivalent devices or systems shall be identified in a list to be made available upon request and must have been approved by the methods required by §115.353 of this title (relating to Alternate Control Requirements).

Adopted April 30, 1997 Effective May 22, 1997

§115.353. Alternate Control Requirements.

For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, any alternate methods of demonstrating and documenting continuous compliance with the applicable control requirements or exemption criteria in this undesignated head (relating to Fugitive Emission Control in Petroleum Refining, Natural Gas/Gasoline Processing, and Petrochemical Processes in Ozone Nonattainment Areas) may be approved by the executive director in accordance with §115.910 of this title (relating to Availability of Alternate Means of Control) if emission reductions are demonstrated to be substantially equivalent.

Adopted April 30, 1997 Effective May 22, 1997

§115.354. Inspection Requirements.

All affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, shall conduct a monitoring program consistent with the following provisions.

(1) Measure yearly (with a hydrocarbon gas analyzer) the emissions from all:

(A) process drains;

(B) nonaccessible valves as identified in §115.352(7) of this title (relating to Control Requirements); and

(C) unsafe to monitor valves. An unsafe to monitor valve is a valve that the owner or operator determines is unsafe to monitor because monitoring personnel would be exposed to an immediate danger as a consequence of complying with paragraph (2) of this section. Valves which are unsafe to monitor shall be identified in a list made available upon request. If an unsafe to monitor valve is not considered safe to monitor within a calendar year, then it shall be monitored as soon as possible during safe to monitor times.

(2) Measure each calendar quarter (with a hydrocarbon gas analyzer) the emissions from all:

(A) compressor seals;

(B) pump seals;

(C) accessible valves; and

(D) pressure relief valves in gaseous service.

(3) Inspect weekly, by visual, audible, and/or olfactory means, all flanges.

(4) Measure (with a hydrocarbon gas analyzer) emissions from any relief valve which has vented to the atmosphere within 24 hours.

(5) Upon the detection of a leaking component, affix to the leaking component a weatherproof and readily visible tag, bearing an identification number and the date the leak was detected. This tag shall remain in place until the leaking component is repaired.

(6) The monitoring schedule of paragraphs (1)-(3) of this section may be modified to require an increase in the frequency of monitoring in a given process area if the executive director determines that there is an excessive number of leaks in that process area.

(7) After completion of the required quarterly valve monitoring for a period of at least two years, the operator of a petroleum refinery; synthetic organic chemical, polymer, resin, or methyl-tert-butyl ether manufacturing process; or a natural gas/gasoline processing operation may request in writing to the

executive director that the valve monitoring schedule be revised based on the percent of valves leaking. The percent of valves leaking shall be determined by dividing the sum of valves leaking during current monitoring and valves for which repair has been delayed (including valves which have been classified as non-repairable under §115.357(8) of this title (relating to Exemptions)) by the total number of valves subject to the requirements. This request shall include all data that have been developed to justify the following modifications in the monitoring schedule.

(A) After two consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0%, an owner or operator may begin to skip one of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(B) After five consecutive quarterly leak detection periods with the percent of valves leaking equal to or less than 2.0%, an owner or operator may begin to skip three of the quarterly leak detection periods for the valves in gas/vapor and light liquid service.

(8) Alternate monitoring schedules approved before November 15, 1996, under §§115.324(a)(8)(A), 115.334(3)(A), and 115.344(3)(A) of this title (relating to Inspection Requirements), as in effect December 3, 1993, are approved monitoring schedules for the purposes of paragraph (7) of this section.

Adopted April 30, 1997 Effective May 22, 1997

§115.355. Approved Test Methods.

For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, compliance with this undesignated head (relating to Fugitive Emission Control in Petroleum Refining and Petrochemical Processes) shall be determined by applying the following test methods, as appropriate.

(1) Test Method 21 (40 CFR 60, Appendix A) for determining volatile organic compound leaks;

(2) determination of true vapor pressure using American Society for Testing and Materials Test Methods D323-89, D2879, D4953, D5190, or D5191 for the measurement of Reid vapor pressure, adjusted for 68°F (20°C) in accordance with API Publication 2517, Third Edition, 1989;

(3) minor modifications to these test methods approved by the Executive Director; or

(4) equivalent determinations using published vapor pressure data or accepted engineering calculations.

Adopted May 4, 1994 Effective May 27, 1994

§115.356. Monitoring and Recordkeeping Requirements.

All affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, shall have the following recordkeeping requirements:

(1) Maintain a components monitoring log which shall contain, at a minimum, the following data:

(A) the name of the process unit where the component is located;

(B) the type of component (e.g., valve or seal);

(C) the tag number of the component;

(D) the date the component was monitored;

(E) the results of the monitoring (in parts per million by volume);

(F) a record of the calibration of the monitoring instrument;

(G) if a component is found leaking:

(i) the date on which a leaking component is discovered;

(ii) the date on which a leaking component is repaired;

(iii) the date and instrument reading of the recheck procedure after a leaking component is repaired; and

(iv) those leaks that cannot be repaired until a unit shutdown;

(H) the total number of components checked and the total number of components found leaking; and

(I) the test method used (Test Method 21, or sight/sound/smell).

(2) Records of the visual, audible, and olfactory inspections of flanges are not required unless a leak is detected.

(3) Maintain all monitoring records for at least two years and make them available for review upon request by authorized representatives of the executive director, United States Environmental Protection Agency, or local air pollution control agencies.

Adopted April 30, 1997 Effective May 22, 1997

§115.357. Exemptions.

For all affected persons in the Beaumont/Port Arthur, Dallas/Fort Worth, El Paso, and Houston/Galveston areas, the following exemptions shall apply.

(1) Components which contact a process fluid containing VOCs having a true vapor pressure equal to or less than 0.044 pounds per square inch absolute (0.3 kPa) at 68°F (20°C) are exempt from the requirements of §115.354 of this title (relating to Inspection Requirements) if the components are inspected visually according to the inspection schedules specified within this same section.

(2) Storage tank valves, pressure relief valves equipped with a rupture disc or venting to a control device, components in continuous vacuum service, and valves that are not externally regulated (such as in-line check valves) are exempt from all the requirements of this undesignated head, except that each pressure relief valve equipped with a rupture disk shall comply with §115.352(9) of this title (relating to Control Requirements).

(3) Compressors in hydrogen service are exempt from the requirements of §115.354 of this title if the owner or operator demonstrates that the percent hydrogen content can be reasonably expected to always exceed 50.0% by volume.

(4) All pumps and compressors which are equipped with a shaft sealing system that prevents or detects emissions of VOC from the seal are exempt from the monitoring requirement of §115.354 of this title. These seal systems may include, but are not limited to, dual pump seals with barrier fluid at higher pressure than process pressure, seals degassing to vent control systems kept in good working order, or seals equipped with an automatic seal failure detection and alarm system. Submerged pumps or sealless pumps (including, but not limited to, diaphragm, canned or magnetic driven pumps) may be used to satisfy the requirements of this paragraph.

(5) Reciprocating compressors and positive displacement pumps used in natural gas/gasoline processing operations.

(6) Components at a petroleum refinery; synthetic organic chemical, polymer, resin, or methyl-tert-butyl ether manufacturing process, which contact a process fluid that contains less than 10% VOC by weight and components at a natural gas/gasoline processing operation which contact a process fluid that contains less than 1.0% VOC by weight are exempt from the requirements of this undesignated head.

(7) Facilities with less than 250 components in VOC service are exempt from the requirements of this undesignated head.

(8) Components in ethylene, propane, or propylene service, not to exceed 5% of the total components, may be classified as non-repairable beyond the second repair attempt at 500 ppmv. These components will remain in the fugitive monitoring program and be repaired no later than 15 calendar days

after the concentration of VOC detected via Test Method 21 exceeds 10,000 ppmv. For the purposes of this undesignated head, components which contact a process fluid with greater than 85% ethylene, propane, or propylene by weight are considered in ethylene, propane, or propylene service, respectively.

(9) Valves rated greater than 10,000 pounds per square inch gauge (psig) are exempt from the requirements of §115.352(4) of this title (relating to Control Requirements).

Adopted April 30, 1997 Effective May 22, 1997

§115.359. Counties and Compliance Schedules.

All affected persons in Brazoria, Chambers, Collin, El Paso, Dallas, Denton, Fort Bend, Galveston, Hardin, Harris, Jefferson, Liberty, Montgomery, Orange, Tarrant, and Waller Counties shall be in compliance with §115.352 of this title (relating to Control Requirements), §115.353 of this title (relating to Alternate Control Requirements), §115.354 of this title (relating to Inspection Requirements), §115.355 of this title (relating to Testing Requirements), §115.356 of this title (relating to Monitoring and Recordkeeping Requirements), and §115.357 of this title (relating to Exemptions) as soon as practicable, but no later than November 15, 1996.

Adopted May 4, 1994 Effective May 27, 1994